IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants	Guy E. Horne, Jr., *et al.*
Application No. 10/766,295	Filing Date: January 27, 2004
Title of Application:	Composite Flexible Endoscope Insertion Shaft With Tubular Substructure
Confirmation No. 9340	Art Unit: 3739
Examiner	Matthew J. Kasztejna

Mail Stop Appeal Brief - Patents
Commissioner for Patents
Post Office Box 1450
Alexandria, VA 22313-1450

Reply Brief Under 37 CFR §41.41

Dear Sir:

Having received the Examiner's Answer, Appellants submit this Reply Brief for the above-captioned application pursuant to 37 C.F.R. §41.41 as follows.

Reply to Examiner's Responses

Appellants have fully set forth its arguments for patentability in its previously filed Appeal Brief. Herein, Appellants briefly address the Examiner's Responses to Appellants' arguments, as set forth in the Examiner's Answer.

As acknowledged by the Examiner, Krauter et al. fail to teach a laminating layer disposed between the wear layer and the braided layer (Examiner's Answer, page 5). However, the Examiner asserts that the inner layer 32 of Abe et al. is fully capable of functioning as a laminating layer, and that it would have been obvious to one of ordinary skill in the art to modify the apparatus of Krauter et al. to include an additional laminated layer, as taught by Abe, between the wear layer and the braided layer to control resilience and durability of the flexible tube (Examiner's Answer, page 7). Appellants respectfully submit that in making the above assertion, the Examiner continues to ignore the fact that both Krauter et al. and Abe et al. expressly teach away from the above modification, and therefore one of ordinary skill on the art would never have been motivated to make the modification proposed by the Examiner.

As discussed in the Appellants' Appeal Brief, Abe et al. disclose the outer cover 3 that is disposed over the core body 2 and that comprises the inner layer 32, the intermediate layer 33, and the outer layer 34 (Col. 10, lines 39-42). The core body 2 includes a helical coil 21 formed from a flat metal band and a reticular tube 22 formed of

braided metal or nonmetal fine wires (Col. 4, line 58 – Col. 5, line 14). Abe et al. specifically teach that the inner layer 32 flows through openings in the braided layer 22, contacts the coil 21, and creates protrusions 31 that extend into the gaps 25 of the coil 21 in order to secure the outer cover 3 to the core body 2 (Col. 7, lines 25-43; FIG. 5). Accordingly, the inner layer 32 taught by Abe et al. does not just jacket the braided layer 22, but also extends through the braided layer into the coil 21 (tubular member) and even past the coil 21 through the gaps to provide a strong bond between the outer cover 3 and the core body 2.

In contrast, an endoscope disclosed in Krauter et al. includes a jacket 22 disposed between the monocoil 21 and the braid layer 23, and a coating layer 24 that penetrates the braid layer 23 and adheres to the jacket 22 (Col. 3, lines 43-49). The jacket 22 acts as an insulating shield between the monocoil 21 and the braid layer 23 to prevent leakage current from the braid layer 23 (Col. 4, lines 24-30). Therefore, it is clear that in the endoscope taught by Krauter et al., the coating layer 24 and the braid layer 23 do not and cannot extend through the jacket 22 into the monocoil 21, as this would be contrary to the express teaching of Krauter et al.

The Examiner states that "when the inner layer 32 of Abe et al. is incorporated into the apparatus of Krauter et al. the inner layer 32 will pass through openings in the braided layer and fuse to the urethane barrier layer in the same fashion that the inner layer 32 fuses together with the coating layer 231 as taught by Abe et al." (Examiner's

Answer, page 8). Appellants do not disagree with the above statement. However, Appellants respectfully submit that the above statement ignores further express teaching of Abe et al., namely that the inner layer 32 also extends through the braided layer into the coil 21 and past the coil 21 through the gaps in the coil. Thus, if a person of ordinary skill in the art were to modify the endoscope of Krauter et al. to include the inner layer as taught by Abe et al., as suggested by the Examiner, he or she would have provided the inner layer that extends not only through the braided layer 23, but also through the jacket 22 and into the monocoil 21. As discussed above, such modification would clearly be contrary to the express teaching of Krauter et al., which is to provide the insulating jacket 22 to shield the monocoil 21 from the braid layer 23 to prevent leakage current.

Additionally, one of ordinary skill in the art would never have been motivated to include the inner layer 32 of Abe et al. in the endoscope of Krauter et al., because the inner layer of Abe et al. would not work with the layer arrangement taught by Krauter et al. in the way intended by the express teaching of Abe et al. Specifically, the jacket 22 of Krauter et al. would prevent any protrusions formed by the inner layer 32 as disclosed in Abe et al. from reaching through the braid layer and into the gaps in the monocoil.

It is well established that a prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.,* 721 F.2d 1540, 220 USPQ 303 (Fed. Cir.

1983), *cert. denied*, 469 U.S. 851 (1984). Appellants respectfully submit that, in reaching his conclusion that it would have been obvious to one skilled in the art combine the inner layer as taught by Abe et al. with the endoscope as taught by Krauter et al., the Examiner fails to consider portions of both references that expressly teach away from such combination, which is improper. Accordingly, because both prior art references expressly teach away from the combination proposed by the Examiner, the present invention is patentable over these references.

For the foregoing reasons, as well as those set forth in Appellants' previously filed Appeal Brief, Appellants respectfully submit that the claimed invention embodied in each of Claims 1-7 and 10-13 is patentable over the cited prior art. As such, Appellants respectfully request that the rejections of each of these Claims be reversed.

Respectfully submitted,

/ Wesley W. Whitmyer, Jr./

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